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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,763	11/20/2003	Johan Cuperus	P/1336-184	8367

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EXAMINER	
LAU, HOI CHING	
ART UNIT	**PAPER NUMBER**
2636	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,763	CUPERUS ET AL.	
	Examiner	Art Unit	
	Hoi C. Lau	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/29/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1- 14 have been examined.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "air gap" in **claim 6**, "reception circuit" in **claim 9**, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In **claim 9**, the reception circuit: is not shown in the original disclosure.

4. The disclosure is objected to because of the following informalities: the component 8 is not consistence in name, "the metallic wall 8 and front plate 8 " in Page 4, lines 6-16.

Appropriate correction is required.

Claim Objections

5. **Claim 1** is objected to because of the following informalities: "hermetical" should add between "a ... metallic enclosure" in the beginning of line 2 and "said" before "hermetical metallic enclosure" at the beginning of line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamel et al. (U.S. 2004/0113790).

Regarding **Claim 1**, Hamel discloses a system comprises a transponder with an antenna and an electronic circuit which is comprised in a hermetical metallic enclosure (Fig. 2a-2c, page 1, paragraph 10-16 and page 6, paragraph 86-87).

As to **Claim 8**, Hamel's system teaches the Q factor of the resonant antenna is degraded in a controlled manner by a resistance (page 4, paragraph 69-70).

7. Claims 2, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Berthon (U.S. 5,864,323).

Regarding **Claim 2**, Berthon discloses a system comprises a reader with an antenna (column 2, lines 39-42) wherein a metallic plate is integral with the enclosure containing the electronic control circuit (column 5, lines 21-38 and column 7, lines 3-25).

As to **Claim 11**, the antenna has coils which are rectangular in cross-section with the large side of the coil closely coupled to the metallic wall of the enclosure (Fig. 11 and column 6, lines 15-21).

As to **Claim 12**, an air gap is provided at the rear of coils, opposite the ferrite element (column 4, lines 53-67 and column 5, lines 47-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. (U.S. 2004/0113790).

Hamel's system teaches the carrier wave is between 20 and 50KHz (page 6, paragraph 89-90) and the enclosure is made of stainless steel (page 6, paragraph 89). Although Hamel is silent on the thickness of the wall, however, this feature is demonstrated in Hamel system as Page 6, paragraph 89-92 show the different range of frequency to penetrate different type of materials.

It would have been obvious to one of ordinary skill in the art would understand the frequency range is adjusted according to the type of metals and their thickness.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. (U.S. 2004/0113790) in view of Berthon (U.S. 5,864,323).

As to **Claim 5,** Hamel's system teaches the antenna has coils which closely coupled to the metallic wall of the enclosure. It fails to shows the coils are rectangular in cross-section.

Berthon teaches the antenna with a rectangular cross-section coils which coupled to the metallic wall of the enclosure (Fig. 11 and column 6, lines 15-21).

It would have been obvious to one of ordinary skill in the art at the time the coils are rectangular cross-section because it would maximum the flux and the sensitivity of the system.

As to **Claim 6**, Hamel fails to show an air gap is provided at the rear of coil.

However, Berthon teaches an air gap is provided at the rear of coils, opposite the ferrite element (column 4, lines 53-67 and column 5, lines 47-51).

It would have been obvious to one of ordinary skill in the art at the time the invention includes air gap because the air gap is the space in the magnetic circuit allowing the armature to move without interference, and the magnetic flux to circulate with minimum resistance (reluctance).

10. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamel et al. (U.S. 2004/0113790) in view of Finkenzeller (RFID Handbook – Radio Frequency Identification Fundamentals and Application).

Hamel teaches the use of resonance and carrier frequency of the antenna. It fails to show the resonance frequency is 5-20% higher than that of the carrier.

Finkenzeller's handbook states that the system with anti-collision procedures where the resonant frequency selected for the transponder is often 5 – 20% higher which is represented in mathematic expression.

It would have been obvious to one of ordinary skill in the art at the time the resonance frequency is higher than the carrier because it would minimize the effect of the interaction of transponders on overall performance.

11. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthon (U.S. 5,864,323) in view of Kunert et al. (U.S. 6,109,528).

Berthon's device meets all the limitation of claims and he teaches a metallic encasement (see abstract). However, he fails to show the metallic encasement is a hermetical closure.

Kunert's device is enclosed in a hermetical housing (column 1, lines 57-60)

It would have been obvious to one of ordinary skill in the art at the time the invention is enclosed in a hermetical housing because it would prevent damage to their internal electronic components against humidity and water.

12. Claims 9, 10 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthon (U.S. 5,864,323) in view of Hamel et al. (U.S. 2004/0113790).

As to **Claim 9**, Berthon teaches a discriminator for passing signals within a selected frequency range (column 5, lines 21-38). However, he fails to clearly state a differentiating filter precedes the reception circuit.

Hamel's system shows the differentiating filter for reception purpose (Fig. 9-11)

It would have been obvious to one of ordinary skill in the art at the time the reader included a differentiating filter because it would envelope the demodulated signals from the antenna.

As to **Claim 10**, Berthon's device meets all the limitation of claims except it fails to shows the range of carrier frequency and the thickness of the stainless steel wall .

Hamel's system teaches the carrier wave is between 20 and 50KHz (page 6, paragraph 89-90) and the enclosure is made of stainless steel (page 6, paragraph 89).

It would have been obvious to one of ordinary skill in the art would understand the frequency range is adjusted according to the type of metals and their thickness.

As to **Claim 14**, Hamel shows the Q factor of the resonant antenna is degraded in a controlled manner by a resistance for the transponder (page 4, paragraph 69-70).

It would have been obvious to one of ordinary skill in the art at the time the conventional communication system use the same Q factor for both transponder and reader within a specific environmental function.

13. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthon (U.S. 5,864,323) in view of Finkenzeller (RFID Handbook – Radio Frequency Identification Fundamentals and Application).

The combination teaches the use of resonance and carrier frequency of the antenna. It fails to show the resonance frequency is 5-20% higher than that of the carrier.

Finkenzeller's handbook states that the system with anti-collision procedures where the resonant frequency selected for the transponder is often 5 – 20% higher which is represented in mathematic expression.

See rejection of claim 7.

It would have been obvious to one of ordinary skill in the art at the time the conventional communication system use the same resonance frequency range for both transponder and reader within a specific environmental function.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carroll (U.S. 4,857,893) teaches a transponder device receives a carrier signal from an interrogator unit. This carrier signal, of frequency F, is rectified by a rectifying circuit in order to generate operating power. Afzali-Ardakani et al. (U.S. 5,767,789) shows a communication of information between the inside and the outside of an electrically conducting enclosure is performed through the use of a frequency selective surface on the electrically conducting enclosure. Endo et al. (U.S. 2005/0007296) teaches an antenna coil includes an air-core coil wound helically in a plane and a plate magnetic core member inserted in the air-core coil to be approximately parallel with a plane of the air-core coil. Akiho et al. (U.S. 2005/0040997) teaches a communication-capable electronic device is provided which includes a metallic housing to accommodate electronic parts of the device, and a communication terminal that makes communications with a communication-cable IC card incorporating an antenna.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoi C. Lau whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HCL

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